

**Mine Safety and Health Admin., Labor**

**§ 75.705-1**

(1) Installation of silicon diodes shall be restricted to electric equipment receiving power from a direct-current system with one polarity grounded;

(2) Where such diodes are used on circuits having a nominal voltage rating of 250, they must have a forward current rating of 400 amperes or more, and have a peak inverse voltage rating of 400 or more;

(3) Where such diodes are used on circuits having a nominal voltage rating of 550, they must have a forward current rating of 250 amperes or more, and have a peak inverse voltage rating of 800 or more;

(4) Where fuses approved by the Secretary are used at the outby end of a trailing cable connected to electrical equipment employing silicon diodes, the rating of such fuses must not exceed 150 percent of the nominal current rating of the grounding diodes;

(5) Where circuit breakers are used at the outby end of a trailing cable connected to electrical equipment employing silicon diodes, the instantaneous trip setting shall not exceed 300 percent of the nominal current rating of the grounding diode;

(6) Overcurrent devices must be used and installed in such a manner that the operating coil circuit of the main contactor will open when a fault current with a value of 25 percent or less of the diode rating flows through the diode;

(7) The silicon diode installed must be suitable to the grounded polarity of the power system in which it is used and its threaded base must be solidly connected to the machine frame on which it is installed;

(8) In addition to the grounding diode, a polarizing diode must be installed in the machine control circuit to prevent operation of the machine when the polarity of a trailing cable is reversed;

(9) When installed on permissible equipment, all grounding diodes, overcurrent devices, and polarizing diodes must be placed in explosion proof compartments;

(10) When grounding diodes are installed on a continuous miner, their nominal diode current rating must be at least 750 amperes or more; and,

(11) All grounding diodes shall be tested, examined and maintained as

electrical equipment in accordance with the provisions of § 75.512.

**§ 75.703-4 Other methods of protecting offtrack direct-current equipment; approved by an authorized representative of the Secretary.**

Other methods of maintaining safe voltage by preventing a difference between the frames of offtrack direct-current machines and the earth must be approved by an authorized representative of the Secretary.

**§ 75.704 Grounding frames of stationary high-voltage equipment receiving power from ungrounded delta systems.**

**[STATUTORY PROVISIONS]**

The frames of all stationary high-voltage equipment receiving power from ungrounded delta systems shall be grounded by methods approved by an authorized representative of the Secretary.

**§ 75.704-1 Approved methods of grounding.**

The methods of grounding stated in § 75.701-1 will also be approved with respect to the grounding of frames of high-voltage equipment referred to in § 75.704.

**§ 75.705 Work on high-voltage lines; deenergizing and grounding.**

**[STATUTORY PROVISIONS]**

High-voltage lines, both on the surface and underground, shall be deenergized and grounded before work is performed on them, except that repairs may be permitted, in the case of energized surface high-voltage lines, if such repairs are made by a qualified person in accordance with procedures and safeguards, including, but not limited to, a requirement that the operator of such mine provide, test, and maintain protective devices in making such repairs, to be prescribed by the Secretary prior to March 30, 1970.

**§ 75.705-1 Work on high-voltage lines.**

(a) Section 75.705 specifically prohibits work on energized high-voltage lines underground;